

Hiroshi HARA*: **New or noteworthy flowering plants
from Eastern Himalaya (10)**

原 寛*: 東部ヒマラヤ植物新知見 (10)**

48) **Bilderdykia filipes** Hara, sp. nov. (Figs. 1, A & 2, a)

Annua. Caulis volubilis 25–80 cm longus rubescens glabrescens. Folia longe petiolata, petiolis 0.7–7 cm longis, cordata apice breviter acuminata basi aperte cordata, 1.5–6 cm longa 1.2–4.2 cm lata glabra, nervis scabris. Inflorescentiae pauciflorae axillares, fasciculatae vel racemosae. Pedicelli 2–6 mm longi, minute scabridi, ad apicem articulati, fructiferes filiformes 8–20 mm longi. Perianthii lobi 5 ovati ca. 1.5 mm longi luteo-viridescens. Stamina 8, ca. 0.8 mm longa; antherae ovaes. Styli 3, liberi ca. 0.3 mm longi; stigmatibus capitulatis. Perianthium in fructu accrescens membranaceum in ambitu ovato-fusiforme 4.5–5.5 mm longum, achenium arcte includens; lobi exteriores 3 dorso anguste alato-carinati, carinis saepe crenato-dentatis. Achenium ovoideum apice acutum acute trigonum ca. 5 mm longum 2.5–3 mm latum castaneum laeve apice perianthio paullo exsertum. Grana pollinis ellipsoidea tricolpata.

Nepal: Mardi Khola, 6500 ft (Stainton, Sykes & Williams, no. 8437, Sep. 16, 1954—type in BM); south of Gurjakhani, 9500 ft (Stainton, Sykes & Williams, no. 3082, Jun. 9, 1954, BM).

The plant is allied to *Bilderdykia Convolvulus* (L.) Dumort., but is characterized in having long filiform fruiting pedicels, slightly larger smooth achenes, and elliptic pollen grains of different structure. In the character of pollen grains, this species is unique among the Asiatic species of the *Polygonum* group, and resembles *Bilderdykia cristata* (Engelm. et Gray) Greene of U. S. A.

49) **Fagopyrum megacarpum** Hara, sp. nov. (Figs. 1, B & 2, b)

Perennis. Rhizoma caudiforme incrassatum lignosum ad 25 cm longum et 12 cm in diametro, intus rubrum. Caulis basi lignosus ad 3 cm in diametro, alte scandens ad 4 m altus fistulosus ramosus glaber, in parte juvenile

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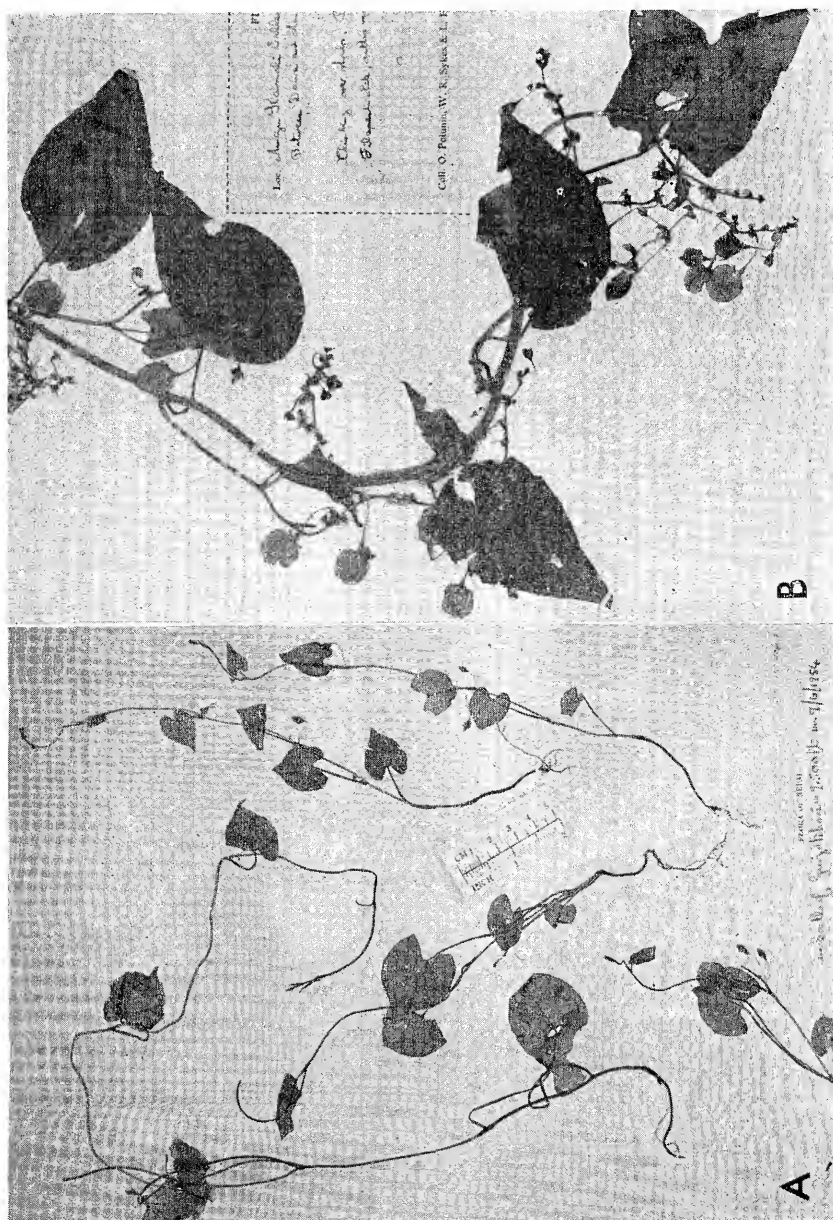


Fig. 1. A. *Bilderdykia filipes* Hara. S. S. and W. no. 3082 (BM). \times ca. 1/3.

B. *Fagopyrum megacarpum* Hara. P. S. and W. no. 3083 (BM). \times ca.1/2.

uno latero minute pilosus. Folia longe petiolata, petiolis vulgo 2–11 cm longis ventro minute pilosis, cordata, apice longe acuminata, basi profunde cordata, 5–15 cm longa 3–14 cm lata glabrescentia, inferiora purpurascens. Inflorescentiae in ramis hornotinis terminales et axillares laxae fasciculato-racemosae, interdum bifidae, minute pilosae. Bractee ovatae acuminatae 2–4 mm longae membranaceae. Pedicelli graciles 3–10 mm longi glabri, inferiore articulati. Perianthii lobi 5 oblongo-ovati 2.5–3.2 mm longi albi vel viridescens, interne minutissime scabri, ecarinati, in fructu non accrescentes. Stamina 8, ca. 2 mm longa alba; antherae ovaes rubrae. Styli 3, liberi 1.2–1.8 mm longi, stigmatibus minute capitatis. Pedicelli fructiferi 8–18 mm longi, versus apicem leviter incrassati. Fructus circum late 3-alati, ambitu orbiculati vel ovati, apice rotundati vel subtruncati, 10–12 mm longi 8–12 mm lati brunnei, alis coriaceis 2–3 mm latis subintegris. Semina immatura? Grana pollinis tricolpata superficie subreticulata, colpi elongati.

W. Nepal: Mugu Kamali Valley, 8000 ft (Polunin, Sykes & Williams, no. 3033, Aug. 25, 1952—type in BM); Syarpagoan—Langtang, 8500 ft (Polunin, no. 1370, Jul. 31, 1949, BM); near Tarakot, Bheri River, 10000 ft (Polunin, Sykes & Williams, no. 2439, Jul. 13, 1952, BM); Lorpa, E. of Jumla, 8500 ft (Polunin, Sykes & Williams, no. 4961, Jul. 31, 1952, BM); Suli Gad, 8000 ft (Stainton, no. 5493, Jul. 7, 1966, BM, TI); ibidem, 8500 ft (Stainton, no. 5499, Jul. 8, 1966, BM, TI).

The species resembles *Bilderdykia pterocarpa* (Wall.) Greene in vegetative characters, but the fruit and fruiting perianth are entirely different from those of

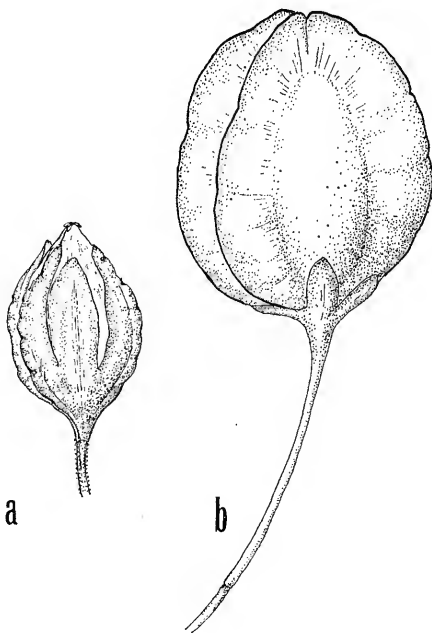


Fig. 2. Fruits ($\times 4$) of *Bilderdykia filipes* Hara (a), and *Fagopyrum megacarpum* Hara (b).

the latter. In some respects, the plant is also similar to *Pteroxygonum Giralddii* Damm. et Diels of C. China, but is clearly different in the shape of fruit.

50) **Rubus calycinoides** O. Kuntze, Meth. Sp. Rubus 67, 78 & 83 (1879).

R. Himalaicus O. Kuntze, l. c. 66, 78, 80 & 83 (1879).

R. Bhotanensis O. Kuntze, l. c. 67, 78 & 82 (1879).

R. Darschilingensis O. Kuntze, l. c. 67, 78 & 82 (1879).

R. diffissus Focke in Bibl. Bot. 17(72) : 83 (1910)—Hara, Fl. E. Himal. 128 (1966) ; 2 : fig. 5 m (1971).

Authentic specimens examined :

Darjeeling, 7000 ft (Clarke, no. 26749 A & B, Jun. 26, 1875—type of *R. diffissus*, K) ; Durjarling (Kuntze, no. 7066, 43 & 43 B, Dec. 1, 1875—type of *R. Bhotanensis*, NY) ; ibid. (Kuntze, no. 7050, Nov. 1875—type of *R. Darschilingensis*, NY) ; ibid. (Kuntze, no. 48 & no. 7047, Nov. 1875—syntypes of *R. Himalaicus*, NY).

Sikkim, Rungbee, 1600 m (Kuntze, no. 7066 (46), Dec. 1, 1875—type of *R. calycinoides*, NY) ; Sikkim, 6000 ft (Kuntze, no. 7050 (44)—syntype of *R. Himalaicus*, NY).

Distr. E. Himalaya (C. & E. Nepal, Sikkim, Bhutan), and Khasia ?

This species belongs to the group of *Rubus rugosus* Smith which needs a further critical revision. But it is clear that four specific epithets proposed by O. Kuntze in 1879 antedate *R. diffissus* Focke (1910). I have examined O. Kuntze's types of those species preserved at the New York Botanical Garden. The specimens annotated as *R. Bhotanensis* by O. Kuntze himself are collected at Darjeeling, and are densely hairy especially in younger parts. The type of *R. Darschilingensis* is a glabrescent form, while the authentic specimens of *R. Himalaicus* include both densely hairy form and glabrescent one. All these specimens are sterile, and the only specimen with fruits is the type of *R. calycinoides*, so I took up this name for the plant in question.

51) **Rubus pungens** Cambessedes in Jacquem., Voy. (Bot.) 4 : 48, t. 59 (1835-44)—Fl. Brit. Ind. 2 : 341 (1878)—Focke in Bibl. Bot. 17(72) : 165 (1911).

var. **horridulus** (Hook. f.) Hara, comb. nov.

R. horridulus Hook. f., Fl. Brit. Ind. 2 : 341 (1878)—Focke in Bibl. Bot. 17(72) : 165 (1911) ; non P. J. Mueller (1868).

R. parapungens Hara in Fl. E. Himal. 2: 58 (1971).

Bhutan: Panga, 7600 ft (Griffith, no. 2160, K); Damthang, Ha Valley (Ludlow & Sherriff, no. 68, BM); Batte Dzong, Ha Chu, 8500 ft (Ludlow & Sherriff, no. 16059, BM); Ha Valley, 9000 ft (Gould, no. 43, K); Thimphu, 2450 m (Apr. 30, 1967, no. 15669, TI).

Distr. sp. Himalaya (Kashmir, Punjab, Nepal, Bhutan), N. Burma, W., C. & N. China, Korea, and Japan.

As already suggested by Focke in 1911, the *Rubus pungens* group distributed from Kashmir through China to Japan seems to belong to a single species, although considerably variable in the size of leaflets, the amount of prickles, and the size of petals. The plants are especially variable in China, and some have large leaflets, and some have almost inermous calyces. The petals are shorter than the calyx in some specimens (e. g. Hupeh, Henry, no. 5427, BM), longer than the calyx in others (e. g. W. Hupeh, E. H. Wilson, no. 3021, BM), or as long as the calyx or slightly longer in some others (e. g. Hupeh, Henry, no. 5469, BM).

A specimen from Chitral (Harriss, no. 16115, BM) agrees well with the Japanese plants in the size and shape of leaves, the amount of acicules on stems and calyces, and petals slightly longer than calyx-lobes, although the former has more densely pubescent pedicels and calyces. Also a specimen from Central Nepal (Lete, Kali Gandaki Valley, 8000 ft, Stainton, Sykes & Williams, no. 5725, BM) coincides well with the Japanese in leaves and prickles, and it fills the gap of the distribution between Western and Eastern Himalayas.

However, the Kashmir specimens tend to have petals shorter than the calyx-lobes which are caudately pointed at the apex, while the Japanese and Korean ones (var. *Oldhami* (Miq.) Maxim.) have rosy petals longer than shortly-pointed calyx-lobes.

The Bhutanese plants have often small leaflets, more densely aciculate stems, peduncles and calyx-lobes, and rosy petals, and were described as *R. horridulus* Hook. f., but seem to me to be a geographical race of *R. pungens*. A specimen from Bhutan (Bumthang, 9000 ft, Ludlow & Sherriff, no. 18906, BM) has less prickly stems and rosy petals slightly longer than the calyx.

52) **Rubus Wardii** Merrill in Brittonia 4: 84 (1941).

R. Hookeri Focke in Abh. Nat. Ver. Bremen 4: 198 (1874); in Bibl. Bot. 17(72): 39 (1910)—Fl. Brit. Ind. 2: 334 (1878)—O. Kuntze, Meth. Sp. Rubus 124 (1879); non K. Koch 1853.

R. gigantiflorus Hara in Journ. Jap. Bot. 40: 327 (1965); Fl. E. Himal. 129 (1966); 2: 57, fig. 5 i (1971).

N. Burma: Adung Valley, 6000 ft (Kingdon-Ward, no. 9454—type of *R. Wardii*, A); North Triangle, 8000 ft (Kingdon-Ward, no. 20863, A).

Distr. E. Himalaya (Sikkim), S.E. Tibet, N. Burma, and W. China (Yunnan).

In 1965 I proposed the new name *Rubus gigantiflorus* for *R. Hookeri* Focke, 1874 (non K. Koch, 1853). But now it became clear that *R. Wardii* described from the northernmost part of Burma is conspecific with this species. The name *R. Wardii* was based on a rather slender and less hairy specimen having smaller flowers, and pedicels only with scattered long glandular hairs and slender prickles. But the other specimen from North Burma is more hairy, and it passes gradually through intermediate forms into typical *R. Hookeri* from Sikkim with dense hairs and larger flowers.

53) **Impatiens Williamsii** Hara, sp. nov.

Annua. Caules 15-60 cm alti vulgo ramosi, praecipue superiore dense pubescentes, pilis patentibus mollibus, rubescentes. Folia alterna petiolata, petiolis basi glandis stipulatis praeditis, elliptica vel oblonga apice acuminata basi late cuneata 3-9 cm longa 1-3.8 cm lata serrata, serris argutis vel incumbentibus et obtusis, utrinque parce pilosa. Inflorescentiae axillares breves 1-3-flores pubescentes. Pedunculi 5-20 mm longi; pedicelli 5-20 mm longi saepe ad apicem bracteolati, bracteolis lineari-lanceolatis 2-4 mm longis pilosis. Alabastra ovoidea apiculata. Sepala 2 ovata 4-5 mm longa ca. 2 mm lata apice cuspidata membranacea pubescentia. Flores mediocres lutescentes saepe brunneo-purpureascentes et purpureo-maculati. Vexillum transverse orbiculare ca. 8 mm longum 10 mm latum apice retusum et mucronulatum dorso carinatum. Alae ca. 2 cm longae, lobo basilaro magno rotundato, lobo distale dolabriforme obtuso. Labellum cymbiforme 9-12 mm longum, apice apiculatum, basi rotundato-gibbosum ecalcere. Stamina 5-6 mm longa; antherae muticae. Capsulae lineares 2.5-3.2 cm longae 2.5-3 mm latae. Semina ovata verrucosa.

Nepal: Between Jumla and Garjigoth, 10000 ft (Polunin, Sykes & Williams, no. 5041, Aug. 8, 1952—type in BM); between Rohagaon and Lulo Khola, Sulgi Gad, 10000 ft (Polunin, Sykes & Williams, no. 3407, Sep. 15, 1952, BM); near Tarakot, Bheri River, 10500 ft (Polunin, Sykes & Williams, no. 2416, Jul. 10, 1952, BM); Hurta, Nagdung Khola, 8000 ft (Polunin, Sykes & Williams, no. 3225, Sep. 6, 1952, BM); Maikot, 8000 ft (Stainton, Sykes & Williams, no. 4716, Oct. 6, 1954, BM).

The plants are allied to *I. serrata* Bentham ex Hook. f. et Thomson, but are easily recognized by the dense pubescence. The species was named in honour of Mr. L. H. J. Williams of the British Museum (Natural History) who collected this species and who has a wide and profound knowledge on the flora of Nepal.

54) **Begonia Hetacoa** Hamilton ex D. Don, Prodr. Fl. Nepal. 223 (1825).

B. rubro-venia Hooker in Bot. Mag. t. 4689 (1853)—Fl. Brit. Ind. 2: 645 (1879)—Hara, Fl. E. Himal. 215 (1966); 2: 85 (1971).

C. Nepal: Sembu (Hamilton, Jul. 8, 1802—type of *B. Hetacoa*, BM).

Distr. E. Himalaya (Nepal to NEFA), Khasia, and Manipur.

I have confirmed that the Hamilton's type exactly agrees with *B. rubro-venia* Hooker.

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48) *Bilderdykia filipes* Hara (新種) ネパール西部産でソバカズラに近いが、果梗が細長く、花粉の形態が著しく違っている。

49) *Fagopyrum megacarpum* Hara (新種) 全形はオオツルイタドリに似ているが、果実の様子は全く異なりソバ類に近い。ネパール西部産。

50) *Rubus calycinoides* O. Kuntze 東部ヒマラヤ産の *R. diffissus* は、現在ニューヨーク植物園にある O. Kuntze の標本を見たところ彼がすでに命名していたことが明らかになった。

51) *Rubus pungens* Cambes. カシミールから日本にまで分布するサナギイチゴ類は変異に富んでいるが、一種として扱うのがよいと考える。

52) *Rubus Wardii* Merrill 巨大な花、果をつけ *R. Hookeri* と呼ばれてきた東部ヒマラヤ産の一種は、ビルマ最北部から記載された *R. Wardii* と同種である。

53) *Impatiens Williamsii* Hara (新種) ネパール産で全体に毛があり、花は中形で距がない。

54) *Begonia Hetacoa* Hamilt. ex D. Don 大英博物館で D. Don の基準標本を見出し、本種の学名を確定した。